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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/647,059

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Mark H. Crane

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HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

PIZIALI, JEFFREY J

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/647,059	<b>Applicant(s)</b> CRANE ET AL.	
	<b>Examiner</b> Jeff Piziali	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 6 February 2004. These drawings are acceptable.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8, 10-18, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

4. Claim 1 newly recites the limitation "the display" in line 9. There is insufficient antecedent basis for this limitation in the claim. Claim 1 earlier recites both "a display assembly" (see line 6) and "a viewing display" (see line 8). It would be unclear to one having ordinary skill in the art whether "the display" (see line 9) refers to the "display assembly" (see line 6), to the "viewing display" (see line 8), or to some other "display" entirely.

5. The term "generally circular portion" in claims 7, 10, 17, and 20 is a relative term which renders the claims indefinite. The term "generally circular portion" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would

Art Unit: 2629

be unclear to one having ordinary skill in the art precisely how near to circular a member portion must be before constituting "generally circular."

6. Claim 11 newly recites the limitation "the display" in line 9. There is insufficient antecedent basis for this limitation in the claim. Claim 11 earlier recites both "a display assembly" (see line 6) and "a viewing display" (see line 8). It would be unclear to one having ordinary skill in the art whether "the display" (see line 9) refers to the "display assembly" (see line 6), to the "viewing display" (see line 8), or to some other "display" entirely.

7. Claims 2-6, 8, 12-16, and 18 are rejected under 35 U.S.C. 112, second paragraph, simply for being dependent upon rejected base claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichikawa et al (US 5,266,930 A).

Regarding claim 1, Ichikawa discloses a headgear system comprising: headgear [Fig. 1; 5] with an upper headgear portion for being worn on a user's head and a lower headgear portion extending from the upper headgear portion for extending forwardly relative to a lower front

Art Unit: 2629

portion of the user's head and below the user's eyes (see Fig. 1; Column 8, Lines 6-59); and a display assembly [Fig. 1; 11] mounted to the lower headgear portion for being located below at least one of the user's eyes so as not to obstruct the user's vision (see Column 8, Line 60 - Column 9, Line 9), the display assembly having a viewing display for displaying information, the information being visible when said at least one of the user's eyes looks downwardly at the display (see Fig. 1), the display assembly being configured to be adjustable by the user while the headgear system is worn by the user for changing the orientation of the display (see Column 9, Lines 10-58).

Regarding claim 2, Ichikawa discloses the headgear is a helmet [Fig. 1; 5], and the lower headgear portion is a face bar (see Fig. 1; Column 8, Lines 6-14).

Regarding claim 3, Ichikawa discloses the display assembly includes at least one rotatable joint [Fig. 2; 21] having frictional resistance so that the joint remains in a particular orientation until moved by the user (see Column 9, Lines 28-58).

Regarding claim 4, Ichikawa discloses the display is sized for viewing by one of the user's eyes when said one of the user's eyes looks downwardly (see Fig. 1; Column 8, Lines 6-14).

Regarding claim 5, Ichikawa discloses the display displays images which are focused to appear to be at optical infinity (see Fig. 1; Column 8, Lines 6-14).

Regarding claim 6, Ichikawa discloses the display assembly has a rotatable horizontal axis for allowing the display to be tilted upwardly and downwardly, and a rotatable vertical axis for allowing the display to be tilted side to side, relative to the user's head (see Figs. 2 & 3; Column 9, Lines 10-22).

Regarding claim 7, Ichikawa discloses the display assembly comprises: a base [Fig. 2; 16] for mounting to the face bar of the helmet, the base having a circular recess that is connected to an entrance slot (see Fig. 4); a rotatable member [Fig. 4; 19] having a generally circular portion that has a snap fit into the circular recess of the base through the entrance slot, the rotatable member being rotatable within the circular recess about the vertical axis; and two side members [Fig. 2; 17] extending from the rotatable member, the display being rotatably mounted between the side members along the horizontal axis (see Column 9, Lines 10-58).

Regarding claim 8, Ichikawa discloses the display assembly [Figs. 32 & 34; 737] is mounted to the face bar of the helmet for being below a first eye [Figs. 32 & 34; E<sub>R</sub>] of the user, the headgear system further comprising a second base [Figs. 32 & 34; 738] mounted to the face bar of the helmet for being below a second eye [Figs. 32 & 34; E<sub>L</sub>] of the user to allow the user to select the position of at least one display by snap fitting an associated rotatable member into the desired base (see Column 8, Lines 3-14 & 40-61; as well as Column 19, Lines 9-17).

Regarding claim 9, this claim is rejected by the reasoning applied in rejecting claims 1 and 6.

Regarding claim 10, this claim is rejected by the reasoning applied in rejecting claim 7.

Regarding claim 11, this claim is rejected by the reasoning applied in rejecting claim 1.

Regarding claim 12, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 13, this claim is rejected by the reasoning applied in rejecting claim 3.

Regarding claim 14, this claim is rejected by the reasoning applied in rejecting claim 4.

Regarding claim 15, this claim is rejected by the reasoning applied in rejecting claim 5.

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claim 6.

Regarding claim 17, this claim is rejected by the reasoning applied in rejecting claim 7.

Regarding claim 18, this claim is rejected by the reasoning applied in rejecting claim 8.

Regarding claim 19, this claim is rejected by the reasoning applied in rejecting claims 1 and 6.

Regarding claim 20, this claim is rejected by the reasoning applied in rejecting claim 7.

### ***Response to Arguments***

10. Applicants' arguments filed 9 June 2006 have been fully considered but they are not persuasive.

The applicants contend the rejection of claims 7, 10, 17, and 20 under 35 U.S.C. 112, second paragraph should be removed, because "the Specification provides a standard to one of ordinary skill in the art for the term 'generally circular'." (see Page 7 of the 'Amendment' filed 9 June 2006). However, the examiner respectfully disagrees. The applicants point to page 5, lines 17-18 of the instant specification which teaches, "a generally circular rotatable member or swivel ring [Fig. 3; 14]." However, the examiner is not alleging a lack of antecedent basis for "generally circular" subject matter in the written description. Instead, the examiner is pointing out that the term "generally circular" is a relative and vague term which renders the claims indefinite. For instance, instant Figure 3 apparently illustrates a "generally circular" rotatable member or swivel ring [Fig. 3; 14] having a "flat" [Fig. 3; 21] cut or chipped off of it. It is readily apparent that the described "generally circular portion" is not actually wholly circular. Therefore, the question remains for one having ordinary skill in the art: precisely how near to *circular* must the member portion be before qualifying as "generally circular"? Can it be an oval? How about a "generally circular" octagon?



The applicants also contend the cited prior art of Ichikawa et al (US 5,266,930 A) neglects teaching a "display assembly having a viewing display for displaying information, the information being visible when said at least one of the user's eye looks downwardly at the display, the display being configured to be adjustable by the user while the headgear is worn by the user for changing the orientation of the display;" or "a rotatable vertical axis for allowing the display to be tilted side to side;" or "a rotatable member having a generally circular portion that has a snap fit into the circular recess of the base through the entrance slot, the rotatable member being rotatable within the circular recess about the vertical axis;" or "a second base mounted to the face bar of the helmet for being below a second eye of the user to allow the user to select the position of at least one display by snap fitting an associated rotatable member into the desired base," (see Pages 9-10 of the 'Amendment' filed 9 June 2006) as instantly claimed. However, the examiner respectfully disagrees.

The applicants allege that Ichikawa's "user does not view images by looking at the display unit [Fig. 1; 11], but instead, the user has to look at the wind shield [Fig. 1; 6], where the images are projected, and which forms the viewing display" (see Page 9 of the 'Amendment' filed 9 June 2006). However, Ichikawa states, "a hologram plate is placed on the shield [Fig. 1; 6] of the helmet so that a display image from the liquid crystal element [Fig. 1; 12] may be projected upon the hologram plate so as to create a hologram image visually observable by a wearer of the helmet [Fig. 1; 5]" (see Column 9, Lines 4-9). As the hologram plate provides a visual representation of information for the user, one skilled in the art would appropriately consider it as constituting "a display." Furthermore, there is nothing during normal operation inhibiting

Art Unit: 2629

Ichikawa's user from looking downwardly at the display assembly [Fig. 1; 11] itself, if he or she so desires.

The applicants also allege, "Since the wind shield [Fig. 1; 6] is not attached to the display unit [Fig. 1; 11], the wind shield [Fig. 1; 6] remains stationary when the display unit [Fig. 1; 11] is moved, so that the orientation of the viewing display (wind shield [Fig. 1; 6]) does not change and is not adjustable. In addition, although the display unit [Fig. 1; 11] can be tilted about two horizontal axes, the display unit [Fig. 1; 11] cannot tilt or rotate about a vertical axis so that there is also no rotation of the disk [Figs. 2-3; 20] about a vertical axis" (see Page 9 of the 'Amendment' filed 9 June 2006). However, Ichikawa states, "The adjusting disk [Figs. 2-3; 20] can be manually moved forward or backward... or left or right so as to rock the display unit [Fig. 1; 11]" (see Column 9, Lines 28-30). Furthermore, it is noted that although the wind shield [Fig. 1; 6] may arguably remain stationary, the actual projected image (which qualifies as "a display") most certainly will change and be adjustable, depending upon left/right and forward/backward adjustments made to the display unit [Fig. 1; 11].

Additionally, Ichikawa discloses a rotatable member [Fig. 4; 19] having a generally circular portion that has a snap fit into the circular recess of the base through the entrance slot, the rotatable member being rotatable within the circular recess about the vertical axis (see Column 9, Lines 10-58).

And lastly, Ichikawa discloses a second base [Figs. 32 & 34; 738] mounted to the face bar of the helmet for being below a second eye [Figs. 32 & 34; E<sub>L</sub>] of the user to allow the user to select the position of at least one display by snap fitting an associated rotatable member into the desired base (see Column 8, Lines 3-14 & 40-61; as well as Column 19, Lines 9-17).

Art Unit: 2629

By such reasoning, rejection of the claims is deemed proper, necessary, and thereby maintained at this time.

***Conclusion***

11. Applicants' amendment (filed 9 June 2006) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The applicants are hereby notified that the examiner's art unit has recently changed from Art Unit 2673 to Art Unit 2629, please direct all future correspondence accordingly. Thank you.

Art Unit: 2629

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeff Piziali  
10 August 2006



BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600